# THE GENUS FITCHIELLA (HOMOPTERA, FULGORIDAE).

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The name Fitchiella was given by Van Duzee in 1917 to the Fulgorids of the genus Naso Fitch because the latter name was found to be preoccupied. The name Naso referred to the swollen apex of the head process as found in the species robertsoni and fitchi. F. melichari, however, while clearly allied to the preceding species, does not have this swollen process. This character, therefore, cannot be considered as of generic value. A striking and definite generic mark, however, is present in the flattened fore and middle tibiae, which coupled with the produced head, makes the genus a readily recognized one.

Five new species, which lack the swollen process but have the flattened tibiae, are described in this paper.

#### KEY TO SPECIES OF FITCHIELLA.

т	Head process knobbed at apex2
1.	Hand process not Imphhad at apar
	Head process not knobbed at apex
2.	Light species marked with black, females 4 mm. long; fore and
	middle tibiae slightly expanded robertsoni Fitch.
	Brownish species, females 5 mm. long; fore and middle tibiae
	greatly expanded fitchi Melichar.
2	Front with longitudinal white string
3.	Front with longitudinal white stripe albifrons sp. n.
	Front entirely dark4
4.	Venter of head process and most of legs reddish.
	rufipes sp. n.
	Venter of head process black and legs (except in minor) usu-
	ally entirely black
_	Hand process were large and and drate arically
5.	Head process very large and quadrate apically.
	grandis sp. n.
	Head process smaller and rounded apically6
6.	Head process quite short; fore tibiae reddishminor sp. n.
	Head process longer; fore tibiae usually dark
7.	Head process longer; fore tibiae very widemelichari Ball
7.	Head process shorter; fore tibiae narrowermediana sp. n.
	ireau process shorter, fore tibiae harrowermediana sp. n.
Fitchiella albifrons sp. n. (Fig. 1. 12.)	

### Fitchiella albifrons sp. n. (Fig. 1, 1a.)

A black species with front and legs marked with white. Length, female 3 mm.; male 2 to 2.5 mm.

<sup>&</sup>lt;sup>1</sup> Contribution from Department of Entomology, University of Kansas.

Head produced into rather long process which is bent downward at about a 45 degree angle, its ventral margin straight half way to eyes; not swollen apically. Front with strong lateral carinae, median carina faint at base but strong apically where it is continuous with apical margin of process; a row of pustules laterad of lateral carinae and a short row just cephalad of eyes. Vertex very short. Pronotum nearly three times as wide as long, with distinct median carina and many pustules. Scutellum with three strong carinae laterad of which are many pustules. Elytra short and reticulated, distinctly longer in male than in female. Abdomen with dorsal median carina and with two rather definite rows of pustules on each segment laterally. Fore and middle tibiae expanded but not as strongly as in some other species. Last ventral segment of female triangular; posterior margin somewhat produced and truncate on median half.

Color: Black above, except for light frons which has all three carinae dark, a faint continuation of this light line on to pronotum and scutellum; eyes tinged with red. Mostly black below except sometimes for brown sides of head process, pale spots on legs and distinctly white dorsal margins

of tibiae, especially first two pairs.

Holotype, female, and male allotype, Santa Rita Mts., Ariz., July 17, 1932, R. H. Beamer. Paratypes: One male and two females, same data; two females, July 18, 1931, and July 11, 1932, Santa Rita Mts., Ariz., E. D. Ball.

Last two paratypes in Dr. Ball's collection; other types in Snow

Entomological Collection.

This species is smaller than *F. melichari*, the head process is straighter below apically, the front is distinctly more concave and the white markings of the front and legs seem characteristic.

## Fitchiella rufipes sp. n. (Figs. 2, 2a.)

A black species with head process and legs tinged with reddish. Length, female 3.25 to 4 mm.; male 2.75 to 3 mm. Head produced into rather long process which is bent downward at about a 45 degree angle, its apex more rounded than in preceding species, its ventral margin straight half way to eyes; not swollen apically. Front with three carinae, the middle one continuous with apical margin of process; a row of pustules laterad or lateral carinae and a short row cephalad of eyes. Vertex very short. Pronotum twice as wide as long, with median carina and covered with pustules. Scutellum with three carinae laterad of which are many pustules. Elytra short in both sexes. Abdomen with indistinct median carina and with lateral pustules. Fore tibiae

very greatly expanded; middle tibiae somewhat less so. Female last ventral segment triangular, posterior margin

somewhat produced and truncate along median half.

Color: Black, tinged with bronze. Lower half of head process and first two pairs of legs down to upper third of tibiae reddish, Hind legs pale, tinged with red to near end of tibiae; rest of tibiae and tarsi black.

Holotype, female, and male allotype, Zion National Park, Utah, Aug. 13, 1929, R. H. Beamer. Paratypes: two females, above data; female, Oak Creek Canyon, Ariz., Aug. 14, 1927, R. H. Beamer; two males and two females, Kanab, Utah, E. D. Ball; female, Provo, Utah, Aug. 10, 1930, E. D. Ball; three females, Granite Dell, Ariz., Aug. 16, 1929, E. D. Ball; two females and a male, Granite Dell, Ariz., Aug. 17, 1929, E. D. Ball.

Specimens taken by Dr. Ball in his collection; all other type

specimens deposited in Snow Entomological Collection.

This species is close to F. melichari but the head process is not so angulate below, the fore tibiae are relatively larger being the largest in the genus, and the reddish color of the head process and legs seems characteristic.

### Fitchiella mediana sp. n. (Figs. 6, 6a.)

A black species close to F. melichari but with head process shorter and with fore tibiae smaller. Length, female 3 to 4

mm.; male 2.5 to 3 mm.

Head process moderately long, not swollen apically, rounded in female, somewhat obliquely truncate in male, ventral angle sharp and cephalad of half the distance to eye. Front with median carina distinct for its entire length. Vertex very short. Pronotum slightly over twice as wide as long, median carina distinct, with many pustules. Scutellum longer than pronotum, with three distinct carinae, lateral portions with many pustules. Elytra short and reticulated, relatively longer in male than in female. Abdomen with dorsal median carina rather distinct and with few pustules laterally on each segment. Last ventral segment of female triangular; posterior margin somewhat produced and truncate on median half.

Color: Nearly uniformly black. Eyes sometimes reddish

and parts of legs pale.

Holotype, female, and male allotype, Sabino Canyon, Ariz., June 14, 1932, R. H. Beamer. Paratypes: Three males, same data; three males, same data except taken on June 12, 1932; female, Tucson, Ariz., Mar. 22, 1931, E. D. Ball; male, Tucson, Ariz., Apr. 2, 1929, E. D. Ball; two females, Bisbee, Ariz., Oct. 14, 1931, E. D. Ball; two males, Baboquivari Mts., Ariz., July 16, 1932, E. D. Ball; female, Baboquivari Mts., Ariz., June 9, 1932, E. D. Ball.

Types from Sabino Canyon deposited in Snow Entomological

Collection; all others in Dr. Ball's collection.

This species seems to stand between F. melichari and the following species.

### Fitchiella minor sp. n. (Figs. 3, 3a.)

A black species close to F. mediana but with shorter head process and with reddish fore and middle tibiae. Length,

female 3.75 mm.

Head process quite short, ventral notch cephalad of middle of distance to eye. Front with median carina fading out at base. Vertex very short. Pronotum about twice as wide as long, with strong median carina and many pustules. Scutellum longer than pronotum, with three carinae and many lateral pustules. Elytra short and reticulated. Fore and middle tibiae distinctly smaller than in *mediana*. Last ventral segment of female triangular; posterior margin produced and truncate on median half.

Color: Black, with suggestion of white stripe along sutural

margin of elytra. Fore and middle tibiae reddish.

Holotype, female, Tucson, Ariz., Mar. 10, 1931, E. D. Ball.

Type in Dr. Ball's collection.

This species has the shortest head process in the series of closely related species composed of this, F. mediana and F. melichari (Fig. 5), the last having the longest process. This species also has the smallest fore tibiae of the three, with melichari (Fig. 5a) having the largest.

### Fitchiella grandis sp. n. (Fig. 4, 4a.)

A black species with very large, apically quadrate, head

process. Length, female 4.25 mm.

Head process very large and truncate apically, straight ventrally fully half way to eyes. Front very large and wide, extending almost to tip of head process, median carina not strong, fading out on basal third. Vertex very short. Pronotum a little over twice as wide as long, median carina distinct, with many pustules. Scutellum longer than pronotum, tricarinate, lateral portions pustulate. Elytra short and reticulated. Fore and middle tibiae not as large relatively as in *melichari*. Posterior margin of last ventral

segment of female slightly produced on median half which is slightly concave.

Color: Black, except for few light markings on legs.

*Holotype*, female, Santa Rita Mts., Ariz., Alt. 4500 ft., Sept. 9, 1925, A. A. Nichol.

Type in Dr. Ball's collection.

This species is easily recognized by its very large, apically quadrate, head process.

The writer is indebted to Dr. Ball for the loan of specimens for study, including the type of *F. melichari* which is here figured.

The drawings figure the lateral views of the head and the fore tibia of the several species.

#### LEPIDOPTERA RECORDS FROM ORIENT, LONG ISLAND, N. Y.

Archips georgiana. Orient, August 17, 1927. One bright

specimen at light.

Loxostege helvialis. Orient, Greenport, Bridgehampton, and Montauk; August 3, 1932, to October 1, 1924, at Orient. All at light.

Loxostege commixtalis. Montauk, East Hampton, Orient, and East Marion; common in Orient in 1932, July 4 to September 30, six to over fifty coming to light during certain nights in August and September.

Loxostege dasconalis. Three-mile Harbor, July 9, 1928.

Sandy field.

Rhodoneura myrsusalis. Montauk, July 26, 1927. At light. Fresh specimen.

Cirrhololina mexicana. Orient, July 9, 1928. At light. Faded specimen.

Melipotis fasciolaris. Montauk, June 17, 1926. At light.

Condition of specimen indicates a stray.

Fagitana littera. Orient. Four specimens, all at light. June 17, 1932, to August 17, 1927. All freshly emerged individuals.

Lepipolys perscripta. Greenport, September 1, 1929. At auto-

mobile light in woods.

Oligia bridghami. Montauk, Bridgehampton, Greenport, and Orient; August 4, 1927, Montauk, to September 7, 1927, Orient. All at light.—Roy LATHAM, Orient, Long Island, N. Y.